ANITA MK12

OPERATING INSTRUCTIONS

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ANITA MK. 12

OPERATING INSTRUCTIONS

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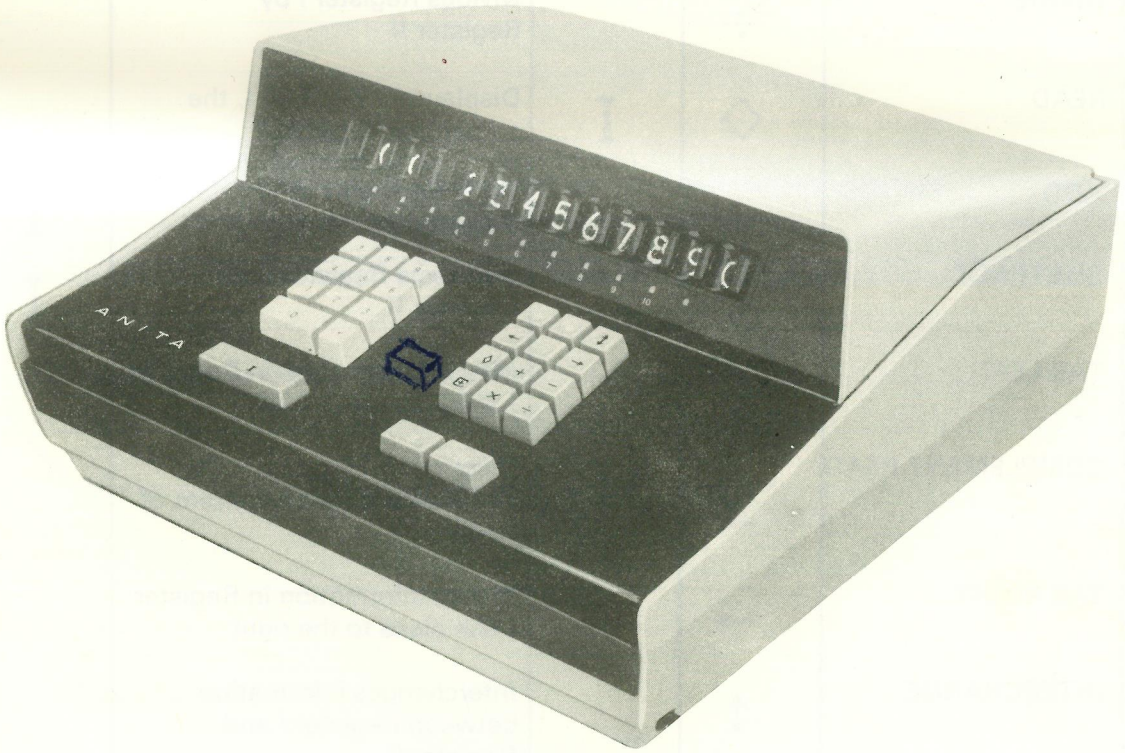
Offices within the United Kingdom and Eire for Sales, Service and Training are listed on page 36.

For advice concerning applications not listed above, contact your nearest Sales office.

Ingetekende knop is elk getal + zichzelf (anders gezegd x2)



ANITA Mk. 12—a three register, two store Electronic Calculator.

Register I displays entries and results in eleven answer tubes. The right hand tube number 12 is part of the internal checking system, always displays 0, and is never read as part of a result.

Registers II and III are internal storage registers and retain calculating factors or are used for accumulation.

Direct access to active internal stores means a new high degree of simplicity and speed in handling all arithmetic sequences.

THE FUNCTION CONTROLS

Registers II and III are identical and interchangeable in function.
This table describes the function of Anita's controls when Register II is engaged.

NAME	SYMBOL	CLEARS INITIALLY	FUNCTION	CLEARS FINALLY
ENTER	⊕	II	Transfers information directly from Register I to Register II	I
MULTIPLY	×		Multiplies Register I by Register II	
DIVIDE	÷		Divides Register I by Register II	
READ	◇	I	Displays, in Register I, the content of Register II	
ADD	+		Adds Register I to Register II	I
SUBTRACT	−		Subtracts Register I from Register II	I
TAB LEFT	←		Moves information in Register I one place to the left	
COMPLEMENT READ	◇ −	I	Displays, in Register I, the complement of the content of Register II	
TAB RIGHT	→		Moves information in Register I one place to the right	
INTERCHANGE	↕		Interchanges information between Register I and Register II	
ADD TO STORE	gn +		Adds Register I to Register III	I
STORE READ	gn *	I	Transfers information from Register III to Register I	III
REGISTER I	rd I	I	Clears Register (i.e. Display Register)	I
REGISTER II	gn II		Engages Register II	
REGISTER III	gn III		Engages Register III	
gs		I II-III	Voor alle registers getal × 2	

NOTE NO. 1
MULTIPLICATION

Register II or Register III can be used for multiplying purposes.

Register II is used in working the examples given.

As in the case of all examples in this booklet, although the explanation of every operating sequence commences with the "Control Action" of engaging Register II or Register III, this is unnecessary if the intended active Register is already engaged.

1. Example. 37·5 x 186·25 = 6984.375

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
37·5		37·5
	⊕	
186·25		186·25
	×	6984·375

2. Example. ·93 x ·46 x 227 = 97·1106

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
·93		·93
	⊕	
·46		·46
	×	·4278
	⊕	
227		227
	×	97·1106

NOTE NO. 2
DIVISION

The versatility of ANITA Mk. 12 is enhanced in that either the Divisor or Dividend may be entered first.

METHOD A.—Entering the DIVISOR first.

1. Example. $\frac{653{\cdot}8875}{49{\cdot}35} = 13{\cdot}25$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
49·35		49·35
	⊕	
653·8875		653·8875
	÷	13·25

METHOD B—Entering the DIVIDEND first

1. Example. $\frac{4{\cdot}875}{{\cdot}625} = 7{\cdot}8$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
4·875		4·875
	⊕	
·625		·625
	↕	4·875
	÷	7·8

NOTE: When the DIVISOR is less than ·1 see Note B, Page No. 26

NOTE NO. 3
CHECKING AND RECALLING

Anita Mk. 12 permits all information to be checked, both visually upon initial entry, and by recall after calculation. Products and quotients can then be recalled as a check of the written answer and for further use.

MULTIPLICATION

1. Example. 140·3 x 22·4 = 3142·72

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
140·3		140·3
	⊕	
22·4		22·4
	×	3142·72
	÷	22·4
	↕	140·3
	×	3142·72

DIVISION

1. Example. $\frac{4293·625}{12·25} = 350·5$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
12·25		12·25
	⊕	
4293·625		4293·625
	÷	350·5
	×	4293·625
	↕	12·25
	↕	4293·625
	÷	350·5

NOTE NO. 4
CONSTANTS

The special design of Anita Mk. 12 provides an easy operating sequence for calculations involving a Constant Multiplier, Divisor or Dividend.

CONSTANT MULTIPLIER

A multiplier entered in the engaged register is held until it is cancelled automatically by entering ⊕ a new factor.

1. Example.

81·25 x 2·79375 = 226·9921875
325· x 2·79375 = 907·96875
1600· x 2·79375 = 4470·

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
2·79375		2·79375
	⊕	
81·25		81·25
	×	226·9921875
	I	
325·		325·
	×	907·96875
	I	
1600·		1600·
	×	4470·

CONSTANT DIVISOR

A Divisor entered in the engaged register is held until it is cancelled automatically by entering ⊕ a new factor.

1. Example.

324· ÷ 18·75 = 17·28
88·5 ÷ 18·75 = 4·72
15·75 ÷ 18·75 = ·84

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
18·75		18·75
	⊕	
324·		324·
	÷	17·28
	I	
88·5		88·5
	÷	4·72
	I	
15·75		15·75
	÷	·84

CONSTANT DIVIDEND

The Recall and Interchange features of MK. 12 are used to retain a Constant Dividend.

1. Example.

15562·26 ÷ ·756 = 20585·
15562·26 ÷ 12·48 = 1246·9759615
15562·26 ÷ 240·6 = 64·68104738

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
·756.	⊕	·756
15562·26.		15562·26
	÷	20585·
	×	15562·26
	⊕	
12·48.		12·48
	↕	15562·26
	÷	1246·9759615
	×	15562·26
	⊕	
240·6.		240·6
	↕	15562·26
	÷	64·68104738

NOTE NO. 5
ADDITION AND SUBTRACTION

Either the engaged or disengaged register may be used. Examples of both methods are given and in illustrating them, Register II is engaged.

METHOD 1.—Using the Engaged Register.

A decimal point is pre-set to allow for the largest entry and result.

1. Example.

76·45
269·50
112·25
458·20

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
000·		Decimal Point No. 4
	⊕	
76·45	→ 1x	76·45
	+	
269·5		269·5
	+	
112·25		112·25
	+	
	◇	458·20

2. Example.

36·
2072·
– 4·5
– 120·25
1983·25

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
0000·		Decimal Point No. 5
	⊕	
36·	→ 2x	36·
	+	
2072.		2072·
	+	
4·5	→ 3x	4·5
	—	
120·25	→ 1x	120·25
	—	
	◇	
		1983·25

NOTE: If the same decimal point is required for other examples, use "–" immediately following "◇" This clears Register 1 and retains the decimal point position in Register II. Having completed Example 2, and cleared Register I by subtracting the final result, Example 3 can be started by indexing 3489·25 and subtracting (–) directly from Register II.

3. Example.

– 3489·25
3412·35
– 63·75
– 140·65

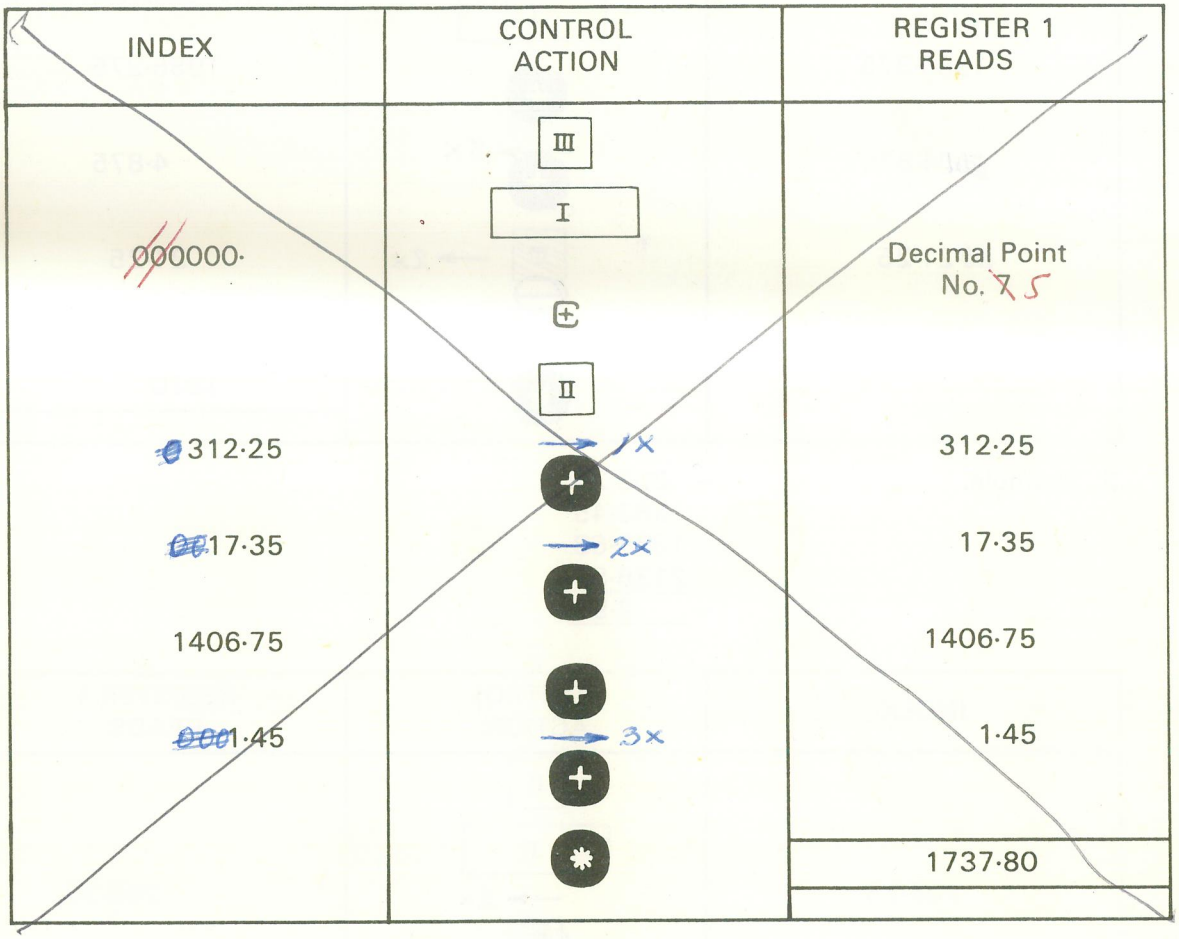
INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
0000·		Decimal Point No. 5
	⊕	
3489·25		3489·25
	—	
3412·35		3412·35
	+	
63·75	→ 2x	63·75
	—	
	◇	
		99859·35
		– 140·65

METHOD 2—Using the Disengaged Register.

Enter a decimal point to allow for the largest item, or answer, that is likely to be required. The decimal point will be retained in position within Register III, after the answer has been cleared.

1. Example.

312·25
17·35
1406·75
1·45
1737·80



onwys gedoe.

2. Example.

1986·375
4·875
– 21·25
1970·00

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	For placing decimal point see ex. method 2 p. 12
	I	
1986·375	+	1986·375
4·875	+ (3×)	4·875
21·25	III → 2×	21·25
	—	
	II	
	*	1970

3. Example.

– 205·25
963·45
1375·68
– 2136·85
– 2·97

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
205·25	III → 2×	205·25
	—	
	II	
963·45	+ (2×)	963·45
1375·68	+ (1×)	1375·68
2136·85	III → 1×	2136·85
	—	
	II	
	*	99999997·03
See Note Below	⊕	
	◆	—2·97

NOTE: When a complementary result is displayed by using * it must be entered to an internal register before using ◆.

NOTE NO. 6
ACCUMULATION

Individual answers are accumulated and aligned in store around a pre-set decimal point.

To work the examples given for this note, Register III is used to accumulate individual results.

Each example is worked using a Decimal Point pre-set in Register III at position 6, so as to provide sufficient capacity for the accumulated results. Having been established to work Examples No. 1, the Decimal Point position is retained for use in working Examples 2-5.

As for Addition, to establish the Decimal Point within Register III, and for the following examples, at position 6,

1. Engage Register III
2. Clear Register I
3. Index 0 five times
4. Enter (⊕)
5. Engage Register II and proceed.

ACCUMULATING PRODUCTS.

Example 1.

6·75 x 34·9 = 235·575
12·4 x 105·35 = 1306·34
3·5 x 2·5 = 8·75
1550·665

INDEX	CONTROL ACTION	REGISTER 1 READS
N.B. Introduction to this Note	II ✱	Decimal Point No. 6
6·75	I ⊕	6·75
34·9	×	34·9
	→ 2×	235·575
12·4	+	12·4
105·35	⊕ ×	105·35 1306·34
3·5	+	3·5
2·5	⊕ ×	2·5 8·75
	→ 3× +	
	✱	1550·665

NEGATIVE MULTIPLICATION

Example 2. (104·5 x 67·3) − (14·2 x 3·8) = 6978·89

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
N.B. Introduction to this Note	*	Decimal Point No. 6
	I	
104·5		104·5
	⊕	
67·3		67·3
	×	7032·85
	+	
14·2		14·2
	⊕	
3·8		3·8
	×	53·96
	III −	
	II −	
	*	6978·89

See ex. 3 on page 13

NEGATIVE MULTIPLICATION *continued*

Example 3. $(1327{\cdot}5 \times 5{\cdot}3) - (1035{\cdot}4 \times 9{\cdot}25) = -2541{\cdot}7$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
N.B. Introduction to this Note	✱	Decimal Point No. 6
	I	
1327·5		1327·5
	⊕	
5·3		5·3
	×	7035·75
	+	
1035·4		1035·4
	⊕	
9·25		9·25
	×	9577·45
	II − I	
	✱	997458·3
	⊕	
	◈	− 2541·7

NOTE: When a complementary result is displayed by using ◈ it must be entered ✱ to an internal register before using ◈

See ex. 3 on page 13

ACCUMULATING QUOTIENTS—Positively and Negatively

Example 4.

$$1607{\cdot}4 \div 3{\cdot}2 = 502{\cdot}3125$$
$$96875{\cdot}3 \div 10{\cdot}25 = \underline{9451{\cdot}24878}$$
$$\underline{9953{\cdot}56128}$$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
N.B. Introduction to this Note	✱	Decimal Point No. 6
	I	
3·2		3·2
	⊕	
1607·4		1607·4
	÷	502·3125
	→ 2×	
	+	
10·25		10·25
	⊕	
96875·3		96875·3
	÷	9451·2487805
	→ 2×	
	+	
	✱	9953·56128

ACCUMULATING QUOTIENTS *continued*

Example 5.

24·35 ÷ ·375 = 64·93333
− 2105·125 ÷ 6·4 = 328·925780
− 263·99245

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
N.B. Introduction to this Note	✱	Decimal Point No. 6
	I	
·375		·375
	⊞	
24·35		24·35
	÷	64·93333
	+	
6·4		6·4
	⊞	
2105·125		2105·125
	÷	328·925780
	III	
	−	
	II	
	✱	
		999736·00755
	⊞	
	◆	− 263·99245

NOTE NO. 7
COMBINED FUNCTIONS

The tabulating keys of ANITA Mk. 12 are used to move figures in Display Register I to the right → or left ←. They are used to ensure that (a) a Multiplier in Register II or Register III has its most significant figure in position Tube No. 2 or to the right of it. (b) a Divisor in Register II or Register III has its most significant figure in position Tube No. 2 (c) a Dividend has its most significant figure in Tube No. 2 or to the right of it.

DIVISION FOLLOWED BY MULTIPLICATION

1. Example. $\frac{4935{\cdot}7}{68{\cdot}4} \times 67{\cdot}25 = 4852{\cdot}716739$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
68·4	⊕	68·4
4935·7		4935·7
	÷	72·15935672
67·25	⊕	67·25
	×	4852·716739

2. Example. $\frac{735{\cdot}4}{1{\cdot}25} \times 9{\cdot}6 = 5647{\cdot}872$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1·25		1·25
	⊕	
735·4		735·4
	÷	588·32
	→/X	588·32
	⊕	
9·6		9·6
	×	5647·872

MULTIPLICATION FOLLOWED BY DIVISION

1. Example. $\frac{673{\cdot}4 \times 13{\cdot}8}{89{\cdot}4} = 103{\cdot}947651$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
673·4	⊕	673·4
13·8	×	13·8
		9292·92
89·4	⊕	89·4
	↕	9292·92
	÷	103·947651

2. Example. $\frac{496{\cdot}3}{(9{\cdot}42 \times 7{\cdot}5)} = 7{\cdot}024769993$ (Calculating the Denominator first)

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
9·42	⊕	9·42
7·5	×	7·5
		70·65
496·3	⊕	496·3
	÷	7·024769993

MULTIPLICATION FOLLOWED BY DIVISION

3. Example. $\frac{827{\cdot}5}{(1{\cdot}4 \times 2{\cdot}3)} = 39{\cdot}59627329$ 256.98757764 (calculationg the Denominator first)

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1·4		1·4
	⊞	
2·3		2·3
	×	3·22
	←	3·22
	⊞	
827·5		827·5
	÷	256·98757764

DIVISION FOLLOWED BY DIVISION (CONTINUED DIVISION)

1. Example. $\frac{2136{\cdot}95}{9{\cdot}875 \times 84{\cdot}9875} = 2{\cdot}546256802$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
9·875		9·875
	⊞	
2136·95		2136·95
	÷	216·4
	⊞	
84·9875		84·9875
	↕	216·4
	÷	2·546256802

MULTIPLICATION FOLLOWED BY DIVISION

3. Example. $\frac{827{\cdot}5}{(1{\cdot}4 \times 2{\cdot}3)} = 39{\cdot}59627329$ 256.98757764 (calculationg the Denominator first)

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1·4		1·4
	⊕	
2·3		2·3
	×	3·22
	←	3·22
	⊕	
827·5		827·5
	÷	256·98757764

DIVISION FOLLOWED BY DIVISION (CONTINUED DIVISION)

1. Example. $\frac{2136{\cdot}95}{9{\cdot}875 \times 84{\cdot}9875} = 2{\cdot}546256802$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
9·875		9·875
	⊕	
2136·95		2136·95
	÷	216·4
	⊕	
84·9875		84·9875
	↕	216·4
	÷	2·546256802

MULTIPLICATION FOLLOWED BY DIVISION

3. Example. $\frac{827{\cdot}5}{(1{\cdot}4 \times 2{\cdot}3)} = 39{\cdot}59627329$ 256.98757764 (calculationg the Denominator first)

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1·4		1·4
	⊕	
2·3		2·3
	×	3·22
	←	3·22
	⊕	
827·5		827·5
	÷	256·98757764

DIVISION FOLLOWED BY DIVISION (CONTINUED DIVISION)

1. Example. $\frac{2136{\cdot}95}{9{\cdot}875 \times 84{\cdot}9875} = 2{\cdot}546256802$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
9·875		9·875
	⊕	
2136·95		2136·95
	÷	216·4
	⊕	
84·9875		84·9875
	↕	216·4
	÷	2·546256802

CONTINUED DIVISION *(Continued)*

2. Example. $\dfrac{735{\cdot}5}{1{\cdot}25 \times 2{\cdot}8} = 210{\cdot}14285714$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1·25		1·25
	⊞	
735·5		735·5
	÷	588·4
	→	588·4
	⊞	
2·8		2·8
	↕	588·4
	÷	210·14285714

ADDITION FOLLOWED BY DIVISION

1. Example. $\dfrac{9687{\cdot}5 + 6875{\cdot}25}{1246{\cdot}75} = 13{\cdot}28474$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
00000· (See introduction ~~to Note 5.~~ on page 12)		Decimal Point No. ~~6~~ page 14
009687·5	⊞	009687·5
	→ 1X	
	~~+~~ ~~1X~~	
006875·25	→ 1X	006875·25
	+	
	◇	16562·75
	~~1X~~	
	⊞	
~~00~~1246·75		1246·75
	↕	16562·75
	÷	13·28474032~~5~~ 25
	→ 4X	000013·28474

NOTE NO. 8
INVOICING
DISCOUNTS AND INCREMENTS

DISCOUNT

Example.

165·75 @ 7·35 = 1218·2625
less 8% = 97·461
1120·8015

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
165·75	⊕	165·75
7·35	×	7·35
		1218·2625
	⊕	
·08	×	·08
	IX ←	97·461
	—	
	◇	1120·8015

INCREMENT

Example.

1245·25 @ 18·5 = 23037·125
plus 5½% = 1267·0418
24304·1668

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1245·25	⊕	1245·25
18·5	×	18·5
		23037·125
	⊕	
·055	×	·055
	+	1267·0418
	◇	24304·1668

INVOICING *(Continued)*

1. Invoice Example.

105·2 x 16·3 = 1714·76
7·4 x 25·5 = 188·70
10·6 x 7·8 = 82·68
1986·14
less 4½% = 89·38
1896·76

INDEX	CONTROL ACTION	REGISTER 1 READS
See Introductory Note to 'Accumulation'.	II ✱ I	Decimal Point No. 6 page 14
105·2		105·2
16·3	⊟ ⊞	16·3
	×	1714·76
	+	
7·4	⊞	7·4
25·5		25·5
	× → 2×	188·70
	+	
10·6	⊞	10·6
7·8		7·8
	× → 2×	82·68
	+	
	✱	1986·14
	⊞	
·045		·045
	× 1× ← if decim. p. is not on six place	89·3763
	—	
	◇	1896·7637

NOTE: If when ✱ is used the result commences in Tube No. 1 → before ⊞

2. Example.

4106 @ 2·75 per doz.	=	940·96	
less 6%	=	56·46	= 884·50
12176 @ 14·5 per gross	=	1226·06	
plus 3%	=	36·78	1262·84
			2147·34
plus $2\frac{1}{2}$%			53·68
			2201·02

INDEX	CONTROL ACTION	REGISTER 1 READS
See Introductory Note to 'Accumulation'	II ✱ I	Decimal Point No. 6
12	⊕	12
4106	÷	4106 342·16•
	→ 1 ×	0342·16•
2·75	⊕	2·75
	× → 1 ×	940·9583• decim. p. in 6
·06	⊕	·06
	× → 1 ×	56·4575 decim. p. in 6
	—	
	◇	884·500833
144	+	144·
12176·	⊕	12176·
	÷	84·5•
14·5	⊕	14·5
	× → 1 ×	1226·05• decim. p. in 6
·03	⊕	·03
	×	36·781667 decim. p. in 6
	+	
	◇	1262·837222
	+	
	✱	2147·33806
·025	⊕	·025
	×	53·68345 decim. p. in 6
	+	
	◇	2201·02151

NOTE NO. 9
THE RING DECIMAL POINT

The Ring Decimal Point system is a unique feature which enables the capacity of ANITA Mk. 12 to display always correct results to the extent of the ten most significant digits.

DIVISION

Example 1. $\frac{1}{23675{\cdot}75} = {\cdot}00004223731033$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
23675·75	⊕	23675·75
1		1
	÷	0422373·1033
	Result = (See Note A.)	·00004223731033

NOTE A.

In the above example, upon the use of the ÷ control, the decimal point moved to the left and re-entered the Display Register from the right. This illustrates the Ring System. The new decimal point position is used to determine the value of the result in display. The number of the illuminated decimal point is subtracted from 10 to indicate the number of zeros which follow the decimal point in the result and which precede the remaining part of the result which is on display. 10 − 7 = 3 So 3 zeros

NOTE B.

To enter a small decimal amount, as required in Example 2, subtract the number of zeros following the decimal point from 11, to determine the decimal point position to be indexed before entry.

Example 2. $\frac{6{\cdot}5}{{\cdot}00047} = 13829{\cdot}787234$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
4700000 (See Note B.)	⊕	04700000·0000
6·5		6·5
	÷	13829·7872340

MULTIPLICATION

1. Example. ·006742 x ·0000439 = ·0000002959738

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
67420000 (See Note B.)		067420000·000
	⊕	
439000 (See Note B.)		0439000·00000
	×	02959·738
	Result = (See Note A.)	·0000002959738

A. The value of the product of a large factor multiplication can be established using the Ring Decimal Point System. In the following example, upon multiplying, the decimal point moves to the right, and re-enters display from the left. In order to establish the value of the product, the number of zeros which should follow the displayed product is determined by subtracting 1 from the illuminated decimal point position.

2. Example. 1455000 x 264755 = 385218525000

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1,455,000		1,455,000
	⊕	
264,755		264,755
	×	0038·5218525
	Result = (See Note Above)	385218525000

NOTE NO. 10
ACCUMULATION AND CONSTANT FACTOR WORK COMBINED

PRORATING (CONSTANT MULTIPLIER)

1. Example. Proportion 1075·25 amongst the items in the first column.

125·	=	353·00
56·25	=	158·85
14·5	=	40·95
185·	=	522·45
380·75	=	1075·25

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
See Note to "Accumulation"	*	Decimal Point No. 6
	I	
0125·		125·
See Note at foot of example	⊡	
0056·25	+	56·25
0014·5	+	14·5
0185·	+	185·
	◇	380·75
1075·25	⊡	1075·25
	÷	2·824031515
125·	⊡	125·
	×	353·003939
	+	
56·25		56·25
	×	158·8517727
	+	
14·5		14·5
	×	40·9484569
	+	
185·		185·
	×	522·445830
	+	
	*	1075·24998

NOTE: Instead of pre-setting a decimal point position when Adding (See Note 5), all examples under Note No. 10 use an alternative method. The first item of addition is indexed and entered (⊡) so as to establish a suitable decimal point position in the engaged register, to which subsequent additions align automatically.

2. Example.

Proportion 496·375 amongst the items in the first column.

967·35	=	37·023
4912·50	=	188·013
1075·25	=	41·152
6014·45	=	230·187
12969·55	=	496·375

INDEX	CONTROL ACTION	REGISTER 1 READS
See Note to "Accumulation"	II	Decimal Point No. 6
	✱	
	I	
0967·35		00967·35
See Note at foot of page No. 28	⊡	
4912·5		4912·5
	+	
1075·25		1075·25
	+	
6014·45		6014·45
	+	
	◇	12969·55
N.B. The most significant figure of a divisor must be in Tube No. 2	→	012969·55
	⊡	
496·375		496·375
N.B. See Ring Decimal Point Note No. 9	÷	382723379·00
N.B. The most significant figure of a multiplier in the engaged register must not be in Tube No. 1	→	·0382723379·0
	⊡	
967·35		967·35
	×	37·02274606
	+	
4912·5		4912·5
	×	188·0128599
	+	
1075·25		1075·25
	×	41·1523313
	+	
6014·45		6014·45
	×	230·1870626
	+	
	✱	496·37498

PROPORTIONAL PERCENTAGE—CONSTANT DIVISOR

1. Example. Express the following items as a Percentage of their total.

2126	=	85·15%
315	=	12·62%
45·5	=	1·82%
10·25	=	·41%
~~2469·75~~ 2496.75		100·00%

INDEX	CONTROL ACTION	REGISTER 1 READS
See Notes to "Accumulation"	II	Decimal Point No. 6
	*	
	I	
2126 See Note at foot of page No. 28	⊡	2126
315	+	315
45·5	+	45·5
10·25	+	10·25
	◇	2496·75 24·9675
00000000 (to divide 2496·75) 100	⊡	
2126	÷	2126
	+	85·15069591
315	÷	315
	+	12·616401321
45·5	÷	45·5
	+	1·8223690798
10·25	÷	10·25
	+	·4105336938
	*	99·99998

2. Example.

Express the following as a percentage of their total.

84	=	·58%
9967	=	69·37%
3905	=	27·18%
412·25	=	2·87%
14368·25		100·00%

INDEX	CONTROL ACTION	REGISTER 1 READS
See Notes to "Accumulation"	II	Decimal Point No. 6
	✱	
	I	
0084		0084
See note at foot of page No. 28	⊕	
9967	+	9967
3905	+	3905
412·25	+	412·25
	◇	14368·25
N.B. The most significant figure of a divisor must occupy Tube No. 2	→	014368·25
00000000		
(To divide 14368·25 / 100)	⊕	143·6825
84		84
See Ring Decimal Point Note No. 9	÷	5846223444·1
N.B.A number to be stored must have its decimal point at No. 1 or to the right of it.	→	·58462234441
9967	+	9967
	÷	69·368225080
3905	+	3905
	÷	27·177979225
412·25	+	412·25
	÷	2·8691733510
	+	
	✱	99·99998

NOTE No. 11
DOUBLE CONSTANT APPLICATIONS

1. Example.

Combined Constant Multiplier and Constant Divisor.
Show the following items as a percentage of their total and 154·75 in proportion amongst them.

29·75	= 13·55%	= 20·97
103·35	= 47·07%	= 72·85
86·45	= 39·38%	= 60·93
219·55	= 100·00%	= 154·75

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
2·1955		2·1955
	⊕	
	III	
1·5475		1·5475
	⊕	
	II	
29·75		29·75
	✱ ÷	13·55044409
	III	
	×	20·96931222
	II	
	I	
103·35		103·35
	✱ ÷	47·07355955
	III	
	×	72·8463334
	II	
	I	
86·45		86·45
	✱ ÷	39·375996356
	III	
	×	60·93435436

NOTE No. 12A
SQUARING AND RAISING NUMBERS TO HIGHER POWERS

1. Example. $10{\cdot}52^2 = 110{\cdot}6704$

INDEX	CONTROL ACTION	REGISTER 1 READS
10·52	II	
	I	10·52
	⊕	
	◇	10·52
	×	110·6704

2. Example. $1{\cdot}46^3 = 3{\cdot}112136$

INDEX	CONTROL ACTION	REGISTER I READS
1·46	II	
	I	1·46
	⊕	
	◇	1·46
	×	2·1316
	×	3·112136

3. Example. $1{\cdot}5^4 = 5{\cdot}0625$

INDEX	CONTROL ACTION	REGISTER 1 READS
1·5	II	
	I	1·5
	⊕	
	◇	1·5
	×	2·25
	⊕	
	◇	2·25
	×	5·0625

4. Example. $1{\cdot}0775^{10} = 2{\cdot}109467253$

INDEX	CONTROL ACTION	REGISTER I READS
	II	
	I	
1·0775		1·0775
	⊕	
	◇	1·0775
	III	
	⊕	
	◇	
(To obtain maximum decimal capacity)	←	1·0775 1·0775
	×	1·16100625
	⊕	
	◇	1·16100625
	←	1·16100625
	×	1·347935512
	II	
	←	1·3479355125
	×	1·452400514
	⊕	
	◇	1·452400514
	←	1·452400514
	×	2·109467253

acc

NOTE No. 12B
SQUARE ROOT CALCULATION

$$\sqrt{N} = \tfrac{1}{2}\left(\frac{N}{a} + a\right)$$

By applying the above formula, ANITA Mk. 12 provides a rapid method of solving Square Root problems.

1. Example. $\sqrt{1245{\cdot}75} = 35{\cdot}29518381$

INDEX	CONTROL ACTION	REGISTER 1 READS
	II	
	I	
1245·75	⊕	1245·75
	III	
35 (i.e. approximate root)	⊕	35
	II	
	◇	1245·75
	III	
	÷	35·59285714
	+	
·5	×	·5 35·29642857
	⊕	
	II	
	◇	1245·75
	III	
	÷	35·29393909
	+	
·5	×	·5 35·29518383
	⊕	
	II	
	◇	1245·75
	III	
	÷	35·29518379
	+	
·5	×	·5 35·29518381
(To prove)	⊕ , ◇ , ×	1245·749999

acc.

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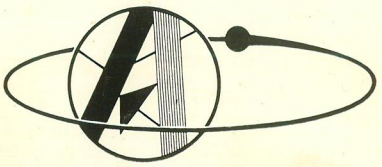
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